

REMARKS

In an Official Action dated March 22, 2004, the Examiner rejected claims 54-63 as anticipated by Stevens 5,460,273. Applicants request that the Examiner reconsider the rejection in light of the following discussion.

Claim 54 recites a mail processing apparatus having an envelope opener, a feeder, a thickness detector, a system controller and an extractor operable to extract contents from opened pieces of mail. The system controller is operable to control the feeder to feed a trailing piece of mail in response to the detected thickness of a leading piece of mail to maintain the proper spacing between the leading and trailing pieces of mail.

The Official Action states that Stevens anticipates the features of claim 54 because Stevens discloses thickness detection and gap spacing determination. However, the portion of Stevens relied upon in the Official Action is directed to a document separation station 75 that operates differently from the apparatus in claim 54 to achieve a different result, as discussed further below.

The separation station 75 in Stevens is used to separate documents that have been extracted from an envelope. Specifically, after a pair of documents are extracted from an envelope, the documents remain in a face to face orientation. In other words, the documents are conveyed along together as a packet of two documents.

The extracted documents need to be separated from one another for further processing. For instance, frequently the documents are check payments so that each pair of extracted documents is a check and a corresponding payment stub. It is ordinarily desirable to separate the checks from the invoices. To do so, the documents are separated so that the documents can be scanned to determine which of the two documents is a check. Accordingly, the separation station is provided to separate the two documents after they are extracted from an envelope.

Further, after the documents are separated, it is desirable to maintain a constant pitch between the leading edge of adjacent documents. In other words, the distance between the leading edges of a first and second document should be the same as the distance between the leading edge of the second document and a third document. For this reason, the separation station 75 identifies the leading edge of each document in a pair of documents as the documents are conveyed through the separation station.

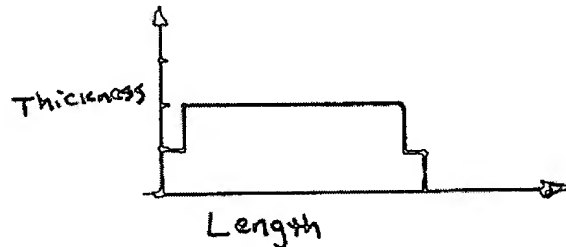
Stevens describes two methods for identifying the leading edges of a pair of documents at the separation station. The first method uses an array of sensors that first detects the leading edge of the first document through the separation station. After the leading document is advanced away from the separation station the array detects the leading edge of the second document. See col. 17, lines 27-44.

The second method for identifying the leading edges utilizes the thickness profile of the documents measured by a thickness detector 60 preceding the separation station 75. Specifically, after the documents are extracted from the envelope, the documents are conveyed through the thickness detector 60 to verify that all of the contents were extracted from the envelope (e.g. if the thickness detected is too thin, it may be assumed that only one of the documents was extracted, so the second document may still be with the envelope).

As a pair of documents is conveyed through the thickness detector in face to face relation, the thickness detector 60 measures the thickness of the pair at a plurality of points along the length of the pair. In other words, the thickness detector obtains a thickness profile of the thickness of the pair of documents along the length of the documents. At the beginning of the thickness profile, the thickness will be equal to the thickness of just the leading edge of whichever document sticks out ahead of the other document. When the leading edge of the second document passes through the thickness detector, the thickness will be equal to the thickness of

both documents. After the trailing edge of one of the documents passes through the thickness detector, the thickness profile will diminish to a single document thickness, and then to zero as the trailing edge of the second document passes through.

Mapped on a graph, a typical thickness profile would appear as follows:



As can be seen from the graph above, the leading edge of the first document is located where the first measured paper thickness appears. The leading edge of the second document is located at the point where the thickness increases to two thicknesses of paper. Since the speed of the documents through the thickness detector, document transport and separation station is known, the location of the leading edge of each document can be determined based on the thickness profile. Since the leading edge of each document is known, the apparatus can control the transport of the two documents through the separation station to maintain the proper pitch between the leading edges of both documents as they are separated.

In contrast to separating two documents after they are extracted, claim 54 is directed to controlling the feeding of pieces of mail that still contain documents. As discussed in the application, it is desirable to determine or approximate the number of documents in an envelope to determine how much space in the flow of documents is necessary to accommodate the documents in the envelope after they are extracted. For instance, if an envelope has a thickness corresponding to five documents, the next envelope should be delayed a sufficient time to allow the five documents to be inserted into the flow of documents after being extracted. If the envelope has a thickness that corresponds to two documents, the next envelope can

be fed more quickly.

As discussed above, the difference between Stevens and claim 54 can readily be seen in the different purposes and results. Stevens is concerned with identifying the leading edge of a pair of documents after the documents are extracted. One method used the thickness profile to identify the leading edges so that the documents could be properly separated.

In contrast to the separation station 75 in Stevens, claim 54 is directed to processing mail in which the contents may still be contained within envelopes by measuring the thickness of the mail while the contents are within the mail. Based on the measured thickness of the mail, the feeding of the subsequent piece of mail is controlled. Nothing in Stevens teaches or suggest measuring the thickness of a piece mail while the contents are still in the piece and then controlling the feeding of the subsequent piece of mail while the contents are still in the piece.

Further, claim 54 recites that the feeder feeds the envelopes to an envelope opener. In the Official Action, the Examiner appears to contend that the separation station is a feeder. However, the separation station 75 does not feed items to an envelope opener. This further distinguishes claim 54 from Stevens.

In addition, since the separation station 75 in Stevens is directed to a different problem, nothing in Stevens suggests modifying the separation station to operate in the manner recited in claim 54. Accordingly, Applicants request that the Examiner reconsider the rejection of claim 54.

Dependent claim 55 is further distinguishable from Stevens. Claim 55 recites that the thickness detector is positioned between the feeder and the opener. As mentioned above, the feeder is recited as feeding the mail to the opener. Nothing in Stevens teaches or suggests positioning a thickness detector between the feeder and the opener and controlling the documents as recited. Accordingly, claim 55 is

further patentably distinct from Stevens.

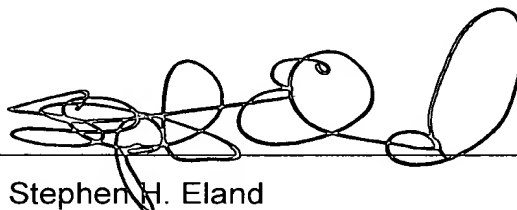
Additionally, claim 57 recites a method that is patentable over Stevens for reasons similar to those described above. Accordingly Applicants request that the Examiner reconsider the rejection of claims 57-63. Finally, Applicants request that the Examiner favorably consider newly presented claims 71-83.

In light of the foregoing, Applicant believes that this application is in form for allowance. The Examiner is encouraged to contact Applicant's undersigned attorney if the Examiner believes that issues remain regarding the allowability of this application.

Respectfully submitted,

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By

A handwritten signature in black ink, appearing to read "Stephen H. Eland", is written over a horizontal line. The signature is stylized with loops and a large, prominent "S".

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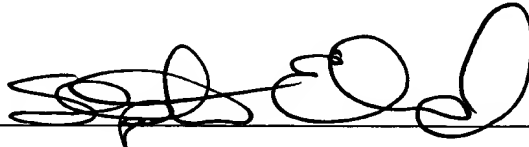
CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

I hereby certify that this Response and accompanying papers are being

deposited on July 22, 2004 with the United States Postal Service as first-class mail in an envelope properly addressed to Commissioner for Patents, Alexandria, VA 22313-1450.

July 22, 2004

Date of Certificate



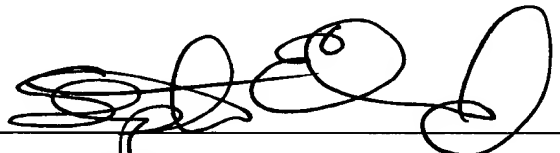
Stephen Eland

Petition for Extension Under 37 CFR §1.136(a)

Applicant's undersigned Attorney hereby petitions for an extension of time of **ONE** month beyond the time period set in the last office communication. The proper fee is enclosed as identified in the enclosed Fee Transmittal form.

July 22, 2004

Date of Certificate



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